



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
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Seattle, WA 98115-0070

Refer to:  
2002/00807

September 9, 2002

Mr. Tom Naylor  
United States Economic Development Agency  
Jackson Federal Building, Room 1856  
915 2<sup>nd</sup> Avenue  
Seattle, WA 98174

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act  
Essential Fish Habitat Consultation for the Union Street/I-84 Undercrossing Project,  
Columbia River, Wasco County, Oregon.

Dear Mr. Naylor:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) on the effects of the U.S. Economic Development Agency's (EDA) proposed extension of Union Street under Interstate Highway (I-84) in order to improve access and recreational opportunities in the downtown area of The Dalles. This project is adjacent to the Bonneville Pool at approximately River Mile 189.5 of the Columbia River. The EDA is providing funding to the city of The Dalles for implementation of the proposed project.

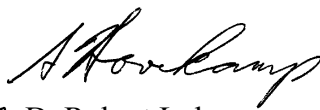
In this Opinion, NOAA Fisheries concluded that the proposed action is not likely to jeopardize the continued existence of ESA-listed Upper Columbia River spring-run (UCRS) chinook salmon (*Oncorhynchus tshawytscha*), Upper Columbia River (UCR) steelhead (*O. mykiss*), Middle Columbia River (MCR) steelhead, Snake River fall-run (SRF) chinook salmon, Snake River spring/summer-run (SRS) chinook salmon, Snake River (SR) sockeye salmon (*O. nerka*), and Snake River Basin (SRB) steelhead. Furthermore, the proposed action is not likely to destroy or adversely modify designated critical habitat(s) for SRF chinook salmon, SRS chinook salmon, and SR sockeye salmon. As required by section 7 of the ESA, NOAA Fisheries included reasonable and prudent measures with non-discretionary terms and conditions that NOAA Fisheries believes are necessary to minimize the impact of incidental take associated with this action.

This Opinion also serves as consultation on essential fish habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR Part 600.



If you have any questions regarding this consultation, please contact David Landsman of my staff in the Oregon Habitat Branch at 503.230.5406.

Sincerely,

  
for D. Robert Lohn  
Regional Administrator

cc: Brian Stahl, The City of The Dalles  
Bob Progulske, USFWS  
Steve Pribyl, ODFW  
Paul Griffin, Congressman Walden's Office

Endangered Species Act - Section 7  
Consultation  
&  
Magnuson-Stevens Act  
Essential Fish Habitat Consultation

BIOLOGICAL OPINION

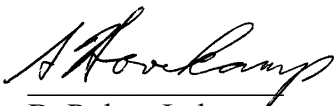
Union Street/I-84 Undercrossing Project  
Columbia River  
Wasco County, Oregon

Agency: United States Economic Development Agency

Consultation  
Conducted By: NOAA Fisheries,  
Northwest Region

Date Issued: September 9, 2002

Issued by:

  
for D. Robert Lohn  
Regional Administrator

Refer to: 2001/01255

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# **1. ENDANGERED SPECIES ACT**

## **1.1 Background**

On July 16, 2002, the National Marine Fisheries Service (NOAA Fisheries) received a letter from the U.S. Economic Development Agency (EDA) requesting formal consultation on the proposed funding for the extension of Union Street under Interstate Highway (I-84) in order to improve access and recreational opportunities in the downtown area of The Dalles, Oregon. The EDA is proposing to provide funding to The City of The Dalles for implementation of the proposed project. Based on information received from the EDA, NOAA Fisheries prepared this biological opinion (Opinion). In the July 16, 2002, letter, the EDA determined that Upper Columbia River spring-run (UCRS) chinook salmon (*Oncorhynchus tshawytscha*), Upper Columbia River (UCR) steelhead (*O. mykiss*), Middle Columbia River (MCR) steelhead, Snake River fall-run (SRF) chinook salmon, Snake River spring/summer-run (SRS) chinook salmon, Snake River (SR) sockeye salmon (*O. nerka*), and Snake River Basin (SRB) steelhead, may occur within the project area and that the proposed project is “likely to adversely affect” (LAA) the subject listed species or the designated critical habitat. References and dates identifying ESA listing status, critical habitat designations, and ESA section 4(d) take prohibitions are listed in Table 1.

NOAA Fisheries initially received a letter from the EDA requesting informal consultation on the Union St./I-84 Undercrossing Project on December 31, 2001. However, NOAA Fisheries did not concur with the EDA’s determination that the project was “not likely to adversely” (NLAA) the subject listed species or their critical habitat and sent a non-concurrence letter to the EDA on February 4, 2002. Subsequently, NOAA Fisheries staff attended a site visit on May 7, 2002, and participated in several meetings to discuss possible revisions to this project.

NOAA Fisheries prepared this Opinion to address impacts to these species as a result of the proposed project, based on the revisions to the project detailed in the EDA letter of July 16, 2002, and accompanying information. The objective of this Opinion is to determine whether the actions included in the proposed project are likely to jeopardize the continued existence of the above listed species or destroy or adversely modify critical habitat.

## **1.2 Proposed Action**

The proposed action is described briefly below. Detailed descriptions and maps of the proposed project can be found in the BA prepared for the EDA and the City of the Dalles by CH2MHill (CH2MHill 2002). This project is adjacent to the Bonneville Pool at approximately river mile (RM) 189.5 of the Columbia River.

The proposed action includes an extension of Union Street under I-84 in order to improve pedestrian and vehicular access and recreational opportunities between the downtown area of The Dalles and the Columbia River shoreline. According to the BA, the primary components of this project include construction of an underpass and connection to existing bike/pedestrian paths

and roads. Construction of the underpass will be done by excavating under I-84 and extending Union Street by approximately 70 meters (m) to join north West 1<sup>st</sup> Street. In total, this project will result in 6,423 square-meters (m<sup>2</sup>) of new impervious surface. This includes a small amount of pervious hard surfaces which will be used in pedestrian areas off of the main riverfront trail and sidewalk areas. No mobile construction equipment refueling or maintenance will occur within 100 m of any water body and all refueling areas will have 100% containment. No large stationary construction equipment will be located closer to the Columbia River than the current edge of pavement of I-84<sup>1</sup>.

Stormwater runoff will be treated using water quality structures designed to treat the stormwater runoff from an area equal to 228% of the new impervious surface added by the project. These structures will be designed by the manufacturer to remove 90% of the total suspended solids (TSS) during a 2-year storm event. The treated runoff will be discharged to the Columbia River in two different locations. In one location, the treated runoff will flow through two discharge pipes, across a rip-rap pad, and then drain across a vegetated, low-gradient, open channel, about 10 m in length, before it reaches the ordinary high water mark of the Columbia River<sup>2</sup>. Four pieces of large wood (LW) will be placed at or below the ordinary high water mark in this area<sup>3</sup>. These LW pieces will be at least 12 inches diameter at the small end and at least 10 feet in length. They will be set perpendicular to the flow and anchored using a method other than backfilling with fill material or using cables. In the second location, the discharge will flow over an existing rip-rap bank as it enters the Columbia River.

The construction will result in the removal of approximately 1,020 m<sup>2</sup> of existing riparian vegetation. The amount of riparian vegetation to be removed has been minimized to the greatest extent possible and all disturbed areas from incidental construction activities will be replanted as soon as practicable. To replace the function of the removed vegetation, riparian vegetation will be added to parts of the project area where it does not currently exist. This new riparian vegetation will include 104 native trees (conifer and deciduous), 570 shrubs, plus wildflower and native riparian seed mixes. To ensure adequate success of the plantings, irrigation will be provided by a water tank truck or by in-situ irrigation equipment, such as a broadcast sprinkler system. A detailed planting plan with explanations was provided in the BA.

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<sup>1</sup>Telephone conversation with Gary Connor, CH2MHill (August 29, 2002) clarifying the use and location of large stationary construction equipment. No large stationary construction equipment will be located closer to the Columbia River than the current edge of pavement of I-84.

<sup>2</sup>Telephone conversation with Gary Connor, CH2MHill (August 20, 2002) confirming the design of the discharge adjacent to the pedestrian overlook at northern end of Union Street. The rip-rap pad will be composed of Class 50 rip-rap and will be approximately 3 m<sup>2</sup>. The discharge channel will be planted with cattails.

<sup>3</sup>E-mail correspondence from Steve Mader, CH2MHill (August 27, 2002) clarifying erosion control of stormwater discharge adjacent to the pedestrian overlook at northern end of Union Street.

In addition to the LW associated with the stormwater discharge, at least two pieces of LW<sup>4</sup> with root wads will be placed along the river bank in the area of the backwater habitat at the eastern end of the project area. The root wads will be in the water and the stems of the LW laid up the bank perpendicular to the water to provide habitat at various water elevations. According to the BA, the LW will be anchored to the bank using a method similar to trenching the LW into the bank or placing large riprap over the stem. The LW will not be cabled to the bank.

### **1.3 Biological Information and Critical Habitat**

The action area is defined by NOAA Fisheries regulations (50 CFR 402) as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” The action area includes designated critical habitats affected by the proposed actions within the Columbia River. The action area for the proposed activities include the immediate river bed and banks where the proposed action will occur, and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. For the purposes of this Opinion, the action area is defined as the streambed and streambank of Columbia River extending one mile upstream and one mile downstream of the project disturbance limits. Other areas of the Columbia River are not expected to be directly affected. There may be temporary indirect effects (sedimentation and construction contaminants) to the Columbia River caused by the in-water work and general riparian and bank disturbance within the project area.

The Columbia River serves as a migration area for all listed species under consideration in this Opinion. It may also serve as a feeding and rearing area for juvenile chum (*O. keta*) and sub-yearling chinook salmon. Essential features of the area for the species are: Substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food (juvenile only), riparian vegetation, space, and safe passage conditions (50 CFR 226). The proposed action may affect the essential habitat features of water quality, cover/shelter, food, riparian vegetation and safe passage conditions.

References for further background on listing status, biological information and critical habitat elements can be found in Table 1.

### **1.4 Evaluating Proposed Actions**

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NOAA Fisheries must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify designated critical habitat. This analysis involves the initial steps of defining

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<sup>4</sup>E-mail correspondence from Greg White, CH2MHill (July 11, 2002) confirming that at least 2 or 3 pieces of LW will be placed below the ordinary high water mark at the eastern end of the project. The BA (CH2MHill 2002) incorrectly stated this as “Up to three (3) LWD pieces”.

the biological requirements and current status of the listed species, and evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NOAA Fisheries evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NOAA Fisheries must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action; (2) the environmental baseline; and (3) any cumulative effects. If NOAA Fisheries finds that the action is likely to jeopardize the listed species, NOAA Fisheries must identify reasonable and prudent alternatives for the action.

Furthermore, NOAA Fisheries evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. NOAA Fisheries must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. NOAA Fisheries identifies those effects of the action that impair the function of any essential element of critical habitat. If NOAA Fisheries concludes that the action will destroy or adversely modify critical habitat, it must identify any reasonable and prudent measures available.

For the proposed action, a jeopardy analysis by NOAA Fisheries considers direct or indirect mortality of fish attributable to the action. A critical habitat analysis by NOAA Fisheries considers the extent to which the proposed action impairs the function of essential elements necessary for migration, spawning, and rearing salmon under the existing environmental baseline.

#### **1.4.1 Biological Requirements**

The first step in the method NOAA Fisheries uses for applying the ESA section 7(a)(2) to listed salmonids is to define the species' biological requirements that are most relevant to each consultation. NOAA Fisheries also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NOAA Fisheries starts with the determinations made in its decision to list the species for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for the listed species to survive and recover to a naturally-reproducing population level, at which time protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance its capacity to adapt to various environmental conditions, and allow it to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful rearing and migration. The current status of the listed species, based upon their risk of extinction, has not significantly improved since the species were listed.



**Table 1.** References for additional background on listing status, biological information, and critical habitat elements for the listed and proposed species considered in this Opinion.

Species	Listing Status	Critical Habitat	Protective Regulations	Biological Information, Historical Population Trends
Columbia River chum salmon	March 25, 1999; 64 FR 14508, Threatened	NA <sup>5</sup>	July 10, 2000; 65 FR 42422	Johnson <i>et al.</i> 1997; Salo 1991
Lower Columbia River steelhead	March 19, 1998; 63 FR 13347, Threatened	NA	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Middle Columbia River steelhead	March 25, 1999; 64 FR 14517, Threatened	NA	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Upper Columbia River steelhead	August 18, 1997; 62 FR 43937, Endangered	NA	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Snake River Basin steelhead	August 18, 1997; 62 FR 43937, Threatened	NA	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Snake River sockeye salmon	November 20, 1991; 56 FR 58619, Endangered	December 28, 1993; 58 FR 68543	November 20, 1991; 56 FR 58619	Waples <i>et al.</i> 1991a
Lower Columbia River chinook salmon	March 24, 1999; 64 FR 14308, Threatened	NA	July 10, 2000; 65 FR 42422	Myers <i>et al.</i> 1998; Healey 1991
Upper Columbia River spring-run chinook salmon	March 24, 1999; 64 FR 14308, Endangered	NA	July 10, 2000; 65 FR 42422	Myers <i>et al.</i> 1998; Healey 1991
Snake River spring/summer-run chinook salmon	April 22, 1992; 57 FR 14653, Threatened	December 28, 1993; 58 FR 68543	April 22, 1992; 57 FR 14653	Matthews and Waples 1991; Healey 1991
Snake River fall-run chinook salmon	April 22, 1992; 57 FR 14653, Threatened	December 28, 1993; 58 FR 68543	April 22, 1992; 57 FR 14653	Waples <i>et al.</i> 1991b; Healey 1991

#### 1.4.2 Environmental Baseline

The most recent evaluation of the environmental baseline for the Columbia River is part of NOAA Fisheries's Opinion for the Federal Columbia River Power System (FCRPS) issued in

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<sup>5</sup>On April 30, 2002, a Federal court vacated the rule designating critical habitat for the LCR chinook salmon, CR chum salmon (*O. keta*), SR steelhead (*O. mykiss*), UCR steelhead, MCR steelhead, and LCR steelhead ESUs considered in this opinion.

December 2000 (NMFS 2000). This Opinion assessed the entire Columbia River system below Chief Joseph Dam, and downstream to the farthest point (the Columbia River estuary and nearshore ocean environment) at which listed salmonids are influenced. A detailed evaluation of the environmental baseline of the Columbia River basin can be found in the FCRPS Opinion.

The quality and quantity of freshwater habitats in much of the Columbia River basin have declined dramatically in the last 150 years. Forestry, farming, grazing, road construction, hydrosystem development, mining, and urbanization have radically changed the historical habitat conditions of the basin. Depending on the species, they spend from a few days to one or two years in the Columbia River and its estuary before migrating out to the ocean and another one to four years in the ocean before returning as adults to spawn in their natal streams.

The water quality in streams throughout the Columbia River basin has been degraded by human activities such as dams and diversion structures, water withdrawals, farming and grazing, road construction, timber harvest activities, mining activities, and urbanization. Tributary water quality problems contribute to poor water quality where sediment and contaminants from the tributaries settle in mainstem reaches and the estuary. Temperature alterations also affect salmonid metabolism, growth rate, and disease resistance, as well as the timing of adult migrations, fry emergence, and smoltification. Many factors can cause high stream temperatures, but they are primarily related to land-use practices rather than point-source discharges. Loss of wetlands and increases in groundwater withdrawals have contributed to lower base-stream flows, which in turn contribute to temperature increases. Channel widening and land uses that create shallower streams also cause temperature increases.

Pollutants also degrade water quality. Salmon require clean gravel for successful spawning, egg incubation, and emergence of fry. Fine sediments clog the spaces between gravel and restrict the flow of oxygen-rich water to the incubating eggs. Excess nutrients, low levels of dissolved oxygen, heavy metals, and changes in pH also directly affect the water quality for salmon and steelhead.

Water quantity problems are also a significant cause of habitat degradation and reduced fish production. Withdrawing water for irrigation, urban, and other uses can increase temperatures, sedimentation, and smolt travel time. Return water from irrigated fields can introduce nutrients and pesticides into streams and rivers. On a larger scale, human activities have affected the timing and amount of peak water runoff from rain and snowmelt. Many riparian areas, flood plains, and wetlands that once stored water during periods of high runoff have been developed. Urbanization paves over or compacts soil and increases the amount and pattern of runoff reaching rivers and streams.

The Columbia River estuary has also been changed by human activities. Historically, the downstream half of the estuary was a dynamic environment with multiple channels, extensive wetlands, sandbars, and shallow areas. The mouth of the Columbia River was about four miles wide. Today, navigation channels have been dredged, deepened and maintained, jetties and pile-dike fields have been constructed to stabilize and concentrate flow in navigation channels,

marsh and riparian habitats have been filled and diked, and causeways have been constructed across waterways. These actions have decreased the width of the mouth of the Columbia River to two miles and increased the depth of the Columbia River channel at the bar from less than 20 to more than 55 feet.

In the action area for the proposed project, one mile upstream and downstream of RM 189, the environmental baseline has been further degraded by human activity and the development and operation of the Columbia River hydropower system. The riparian area in this reach of the Columbia River contains little cover and vegetation and includes riprapping of the large majority of the streambank in this reach. These past activities and development of this area have contributed to the degraded conditions of this reach of the Columbia River, including reduced water quality, increased water temperature, altered timing and quantity of runoff, and decreased riparian cover and habitat refugia.

## **1.5 Analysis of Effects**

### **1.5.1 Effects of Proposed Actions**

#### **1.5.1.1 Sedimentation/Chemical Contamination**

Potential impacts to listed salmonids from the proposed action include both direct and indirect effects. Potential direct effects include mortality from exposure to contaminants resulting from construction. Potential indirect effects include behavioral changes resulting from elevated turbidity level during river bank habitat alterations, and altered hydrology and reduced water quality associated with increased impervious area.

##### Sedimentation.

Salmonids have evolved in systems that periodically experience short-term pulses (days to weeks) of high suspended sediment loads, often associated with flood events, and are adapted to such high pulse exposures. Behavioral effects on fish, such as gill flaring and feeding changes, have been observed in response to pulses of suspended sediment (Berg and Northcote 1985). Adult and larger juvenile salmonids may be little affected by the high concentrations of suspended sediments that occur during storm and snowmelt runoff episodes (Bjornn and Reiser 1991). Newly emerged salmonid fry may be vulnerable to even moderate amounts of turbidity (Bjornn and Reiser 1991). Also, turbidity, at moderate levels, has the potential to adversely affect primary and secondary productivity (Spence *et al.* 1996). However, because the potential for turbidity should be localized and brief, and the fish present are likely to be adult and large juveniles, the probability of direct and indirect effects due to sedimentation is negligible.

##### Construction-related Chemical Contamination.

As with all construction activities, accidental release of fuel, oil, and other contaminants may occur. Operation of the back-hoes, excavators, and other equipment requires the use of fuel, lubricants, etc., which, if spilled into the channel of a water body or into the adjacent riparian zone, can injure or kill aquatic organisms. Petroleum-based contaminants (such as fuel, oil, and

some hydraulic fluids) contain poly-cyclic aromatic hydrocarbons (PAHs), which can be acutely toxic to salmonids at high levels of exposure and can also cause chronic lethal and acute and chronic sublethal effects to aquatic organisms (Neff 1985).

Construction related effects necessary to complete the proposed action will be minimized by completing the in-water work associated with the LW placement during the Oregon Department of Fish and Wildlife (ODFW) preferred in-water work period, July 15 - November 15 (ODFW 2000). Also, no mobile construction equipment refueling or maintenance will occur within 100 m of any water body, no large stationary construction equipment will be located closer to the Columbia River than the current edge of pavement of I-84, all refueling areas will have 100% containment, and no construction equipment will enter the flowing water as a result of the proposed action.

#### Impervious areas.

Impervious pavement used in roadways and parking areas may result in altered hydrology (timing and duration of peak and base flows) and reduced water quality (Paul and Meyer 2001). Roadways and parking areas have the potential to indefinitely transmit contaminants to waterbodies, if a hydrologic connection (e.g. ditch) exists. However, the project proponent has minimized the amount of new impervious surface (approximately 6,423 m<sup>2</sup>) to the greatest extent possible and a small amount of this area will use pervious hard surfaces to further minimize adverse affects. Also, the proposed stormwater detention facilities are designed to treat 228% of the new impervious surface. The project proponent will incorporate stormwater treatment that, according to manufacturer specifications, will be at least 90% effective in the removal of total suspended solids for the 2 year event flow and will also remove some floatables. Although the system will not be designed to remove soluble metals, some metals are likely to be adhered to the TSS and will be removed along with the TSS. Effectively this will result in the project's capacity to be able to remove more of the TSS from the action area than if the proposed project were not constructed. The erosive potential of this treated runoff as it enters the Columbia River is expected to be very low. Energy will be greatly dissipated as the runoff crosses the vegetated channel and LW structures in one location and the rip-rap bank in another location. Therefore, proposed project facilities will minimize the potential for adverse effects to stream hydrology and water quality.

#### **1.5.1.2 Riparian Habitat**

The manipulation of vegetation and LW associated with construction in riparian areas and in stream channels can change the characteristics of the riparian areas in both the short- and long-term in ways which would tend to adversely affect fish. Vegetation in riparian areas influences channel processes through stabilizing bank lines, and providing LW, terrestrial food sources rather than autochthonous food production, and regulating light and temperature regimes (Kondolf *et al.* 1996, Naiman *et al.* 1993). Vegetation in riparian areas provides soil stability, shade, LW supply, and food for fish and their prey. In addition, riparian vegetation and LW can provide low velocity shelter habitat for fish during periods of flooding, while instream LW provides similar habitat at all flow levels, as well as shelter from predators, habitat for prey

species, and the sediment storage and channel stability attributes described above (Spence *et al.* 1996).

The proposed project will result in permanent loss of approximately 1,020 m<sup>2</sup> vegetation. The extent of loss has been minimized to the greatest extent possible. The proposed project includes revegetation of riparian areas disturbed by construction activities which, in time, will maintain or improve habitat conditions for salmonids within the action area by potentially increasing plant densities in degraded areas or changing plant species at the site to those that are more beneficial to aquatic species. The increase in habitat complexity and quality associated with riparian planting and LW placement is expected to result in a long-term beneficial effect on anadromous salmonid migration and rearing habitat at the project site.

### **1.5.2 Effects on Critical Habitat**

NOAA Fisheries designates critical habitat based on physical and biological features that are essential to the listed species. Essential features for designated critical habitat include substrate, water quality, water quantity, water temperature, food, riparian vegetation, access, water velocity, space and safe passage. Effects on these essential features from the proposed action are detailed in the effects description above.

The proposed action will affect SRF chinook salmon, SRS chinook salmon, and SR sockeye salmon critical habitat. In the short term, a temporary increase of sediments and turbidity and disturbance of riparian and in stream habitats are expected. NOAA Fisheries does not expect that the net effect of this action will diminish the long term value of the habitat for survival and recovery SRF chinook salmon, SRS chinook salmon, and SR sockeye salmon.

### **1.5.3 Cumulative Effects**

Cumulative effects are defined in 50 CFR 402.02 as those effects of "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." Future Federal actions, including the ongoing operation of hydropower systems, hatcheries, fisheries, and land management activities are being (or have been) reviewed through separate section 7 consultation processes. Therefore, these actions are not considered cumulative to the proposed action.

NOAA Fisheries is not aware of any specific future non-federal activities within the action area that would cause impacts to listed species beyond what presently occurs. NOAA Fisheries assumes that future private and state actions will continue at similar intensities as in recent years.

## **1.6 Conclusion**

NOAA Fisheries has determined, based on the available information, that the proposed action covered in this Opinion is not likely to jeopardize the continued existence of listed salmonids or adversely modify designated critical habitat. NOAA Fisheries used the best available scientific

and commercial data to apply its jeopardy analysis, when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline, together with cumulative effects. NOAA Fisheries believes that the proposed action will cause a minor, short-term degradation of anadromous salmonid habitat due to turbidity caused by construction activities, loss of riparian vegetation, and possible decrease in water quality. Direct mortality is not expected. The completed project will increase the overall amount of riparian vegetation in the project area and improve water quality.

## **1.7 Conservation Recommendations**

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. NOAA Fisheries does not request any conservation recommendations for this action.

## **1.8 Reinitiation of Consultation**

This concludes formal consultation on the proposed action in accordance with 50 CFR 402.14(b)(1). Reinitiation of consultation is required: (1) If the amount or extent of incidental take is exceeded; (2) if the action is modified in a way that causes an effect on the listed species that was not previously considered in the biological assessment and this biological opinion; (3) new information or project monitoring reveals effects of the action that may affect the listed species in a way not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16).

## **2. INCIDENTAL TAKE STATEMENT**

Section 9 and rules promulgated under section 4(d) of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. “Harass” is defined as actions that create the likelihood of injuring listed species to by annoying it to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. “Incidental take” is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

## **2.1 Amount or Extent of the Take**

NOAA Fisheries anticipates that the action covered by this Opinion is reasonably certain to result in incidental take of listed salmonids because of detrimental effects from turbidity caused by construction activities, loss of riparian vegetation, and possible decrease in water quality. Effects of actions such as the one covered by this Opinion are largely unquantifiable in the short term, and are not expected to be measurable as long-term effects on habitat or population levels. Therefore, even though NOAA Fisheries expects some low level incidental take to occur due to the action covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NOAA Fisheries to estimate a specific amount of incidental take to the species itself. In instances such as these, NOAA Fisheries designates the expected level of take as "unquantifiable."

Based on the information provided by the EDA and other available information, NOAA Fisheries anticipates that an unquantifiable amount of incidental take could occur as a result of the action covered by this Opinion. The extent of the take is limited to the action area.

## **2.2 Reasonable and Prudent Measures**

NOAA Fisheries believes that the following reasonable and prudent measures are necessary and appropriate to avoid or minimize take of listed salmonid species resulting from the action covered by this Opinion. The EDA shall include measures that will:

1. Minimize the likelihood of incidental take from in-water work associated with LW (LW) placement by following best management practices for LW placement and by timing the completion of all in-water work as necessary to avoid harming vulnerable salmon life stages, including spawning, migration, and rearing.
2. Minimize the amount and extent of incidental take from construction activities in or near the water by implementing effective erosion and pollution control measures, minimizing the movement of soils and sediment both into and within the stream, and stabilizing bare soil in the short and long term.
3. Complete a comprehensive monitoring and reporting program to ensure measures provided in this Opinion are effective in minimizing the likelihood of take from permitted activities.

## **2.3 Terms and Conditions**

To be exempt from the prohibitions of section 9 of the ESA, the EDA and/or their contractors must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To implement Reasonable and Prudent Measure #1 (in-water work), the EDA shall ensure that:
  - a. Large Wood. At least six pieces of LW will be included as part of this project. Avoid or minimize the use of rock, stone and similar materials.
    - i. LW must be intact, hard, and undecayed to partly decaying with untrimmed root wads to provide functional refugia habitat for fish. Use of decayed or fragmented wood found laying on the ground or partially sunken in the ground is not acceptable.
    - ii. Rock may be used as ballast to anchor or stabilize LW components of a structural or biotechnical bank treatment. The rock must be class 350 metric or larger, wherever feasible, but may not constrict the channel migration zone or impair natural stream flows into or out of secondary channels or riparian wetlands.
  - b. In-water work timing. All work within the active channel of all anadromous fish-bearing streams, or in systems which could potentially contribute sediment or toxicants to downstream fish-bearing systems, will be completed within the ODFW in-water work period of November 15 to March 15 (ODFW 2000).
    - i. Work period extensions. Extensions of the in-water work period, including those for work outside the wetted perimeter of the stream but below the ordinary high water mark, must be approved by biologists from NOAA Fisheries.
2. To implement Reasonable and Prudent Measure #2 (general conditions for construction, operation and maintenance), the EDA shall ensure that:
  - a. Cessation of work. Project operations will cease under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
  - b. Pollution and Erosion Control Plan. A Pollution and Erosion Control Plan will be prepared and carried out to prevent pollution related to construction operations. The plan must be available for inspection on request by EDA or NOAA Fisheries.
    - i. Plan Contents. The Pollution and Erosion Control Plan must contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.
      - (a) Practices to prevent erosion and sedimentation associated with access roads, stream crossings, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations and staging areas.
      - (b) Practices to confine, remove and dispose of excess concrete, cement and other mortars or bonding agents, including measures for washout facilities.
      - (c) A description of any hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.



- (d) A spill containment and control plan with notification procedures, specific clean up and disposal instructions for different products, quick response containment and clean up measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.
    - (e) Practices to prevent construction debris from dropping into any stream or water body, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.
  - ii. Inspection of erosion controls. During construction, all erosion controls must be inspected daily during the rainy season and weekly during the dry season to ensure they are working adequately.<sup>6</sup>
    - (a) If inspection shows that the erosion controls are ineffective, work crews must be mobilized immediately to make repairs, install replacements, or install additional controls as necessary.
    - (b) Sediment must be removed from erosion controls once it has reached 1/3 of the exposed height of the control.
- c. Construction discharge water. All discharge water created by construction (e.g., concrete washout, vehicle wash water) will be treated as follows.
  - i. Water quality. Facilities must be designed, built and maintained to collect and treat all construction discharge water using the best available technology applicable to site conditions. The treatment must remove debris, nutrients, sediment, petroleum hydrocarbons, metals and other pollutants likely to be present.
  - ii. Discharge velocity. If construction discharge water is released using an outfall or diffuser port, velocities must not exceed 4-feet per second.
  - iii. Spawning areas. No construction discharge water may be released within 300-feet upstream of active spawning areas
- d. Preconstruction activity. Before significant<sup>7</sup> alteration of the project area, the following actions must be completed.
  - i. Marking. Flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands and other sensitive sites beyond the flagged boundary.
  - ii. Emergency erosion controls. Ensure that the following materials for emergency erosion control are onsite.
    - (a) A supply of sediment control materials (e.g., silt fence, straw bales<sup>8</sup>).

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<sup>6</sup> "Working adequately" means no turbidity plumes are evident during any part of the year.

<sup>7</sup> "Significant" means an effect can be meaningfully measured, detected or evaluated.

<sup>8</sup> When available, certified weed-free straw or hay bales must be used to prevent introduction of noxious weeds.

- (b) An oil absorbing floating boom whenever surface water is present.
- iii. Temporary erosion controls. All temporary erosion controls must be in-place and appropriately installed downslope of project activity within the riparian area until site restoration is complete.
- b. Temporary access roads.
  - i. Existing roadways. Existing roadways or travel paths must be used whenever possible, unless construction of a new roadway or travel path would result in less habitat take.
  - ii. Steep slopes. Temporary roads built mid-slope or on slopes steeper than 30 percent are not authorized.
  - iii. Minimizing soil disturbance and compaction. When a new temporary road is necessary within 150-feet<sup>9</sup> of a stream, water body or wetland, soil disturbance and compaction must be minimized by clearing vegetation to ground level and placing clean gravel over geotextile fabric, unless otherwise approved in writing by NOAA Fisheries.
  - iv. Obliteration. When the project is completed, all temporary access roads must be obliterated, the soil must be stabilized, and the site must be revegetated. Temporary roads in wet or flooded areas must be abandoned and restored as necessary by the end of the in-water work period.
- c. Heavy Equipment. Use of heavy equipment will be restricted as follows.
  - i. Choice of equipment. When heavy equipment must be used, the equipment selected must have the least adverse effects on the environment (e.g., minimally sized, rubber tired).
  - ii. Vehicle staging. Vehicles must be fueled, operated, maintained and stored as follows.
    - (a) Vehicle staging, cleaning, maintenance, refueling, and fuel storage must take place in a vehicle staging area placed 150-feet or more from any stream, water body or wetland.
    - (b) All vehicles operated within 150-feet of any stream, water body or wetland must be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected must be repaired in the vehicle staging area before the vehicle resumes operation. Inspections must be documented in a record that is available for review on request by EDA or NOAA Fisheries.
    - (c) All equipment operated instream must be cleaned before beginning operations below the bankfull elevation to remove all external oil, grease, dirt, and mud.

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<sup>9</sup> Distances from a stream or water body are measured horizontally from, and perpendicular to, the bankfull elevation, the edge of the channel migration zone, or the edge of any associated wetland, whichever is greater. "Channel migration zone" means the area defined by the lateral extent of likely movement along a stream reach as shown by evidence of active stream channel movement over the past 100 years, e.g., alluvial fans or floodplains formed where the channel gradient decreases, the valley abruptly widens, or at the confluence of larger streams.

- iii. Stationary power equipment. Stationary power equipment (e.g., generators, cranes) operated within 150-feet of any stream, water body or wetland must be diapered to prevent leaks, unless otherwise approved in writing by NOAA Fisheries.
- d. Site preparation. Native materials will be conserved for site restoration.
  - i. If possible, native materials must be left where they are found.
  - ii. Materials that are moved, damaged or destroyed must be replaced with a functional equivalent during site restoration.
  - iii. Any LW<sup>10</sup>, native vegetation, weed-free topsoil, and native channel material displaced by construction must be stockpiled for use during site restoration.
- e. Earthwork. Earthwork (including drilling, excavation, dredging, filling and compacting) will be completed as quickly as possible.
  - i. Site stabilization. All disturbed areas must be stabilized, including obliteration of temporary roads, within 12 hours of any break in work unless construction will resume work within 7 days between June 1 and September 30, or within 2 days between October 1 and May 31.
  - ii. Source of materials. Boulders, rock, woody materials and other natural construction materials used for the project must be obtained outside the riparian area.
- f. Construction of new impervious surface/stormwater management. Beyond construction terms and conditions above, this project must also control the quality of the resulting stormwater runoff for the life of the project.
  - i. On-site stormwater management.
    - (a) Stormwater best management practices (BMPs)<sup>11</sup> will be used for stormwater source control and treatment individually or in a series as necessary to minimize, retain, treat, and infiltrate stormwater

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<sup>10</sup> For purposes of this Opinion only, "LW" means a tree, log, or rootwad big enough to dissipate stream energy associated with high flows, capture bedload, stabilize streambanks, influence channel characteristics, and otherwise support aquatic habitat function, given the slope and bankfull width of the stream in which the wood occurs. See, Oregon Department of Forestry and Oregon Department of Fish and Wildlife, *A Guide to Placing Large Wood in Streams*, May 1995 ([www.odf.state.or.us/FP/RefLibrary/LargeWoodPlacemntGuide5-95.doc](http://www.odf.state.or.us/FP/RefLibrary/LargeWoodPlacemntGuide5-95.doc)).

<sup>11</sup> For purposes of this Opinion, "stormwater BMP" means a procedure or structure that, when used individually or in series, will avoid or minimize the adverse effects of stormwater on riparian and aquatic habitats. On-site stormwater BMPs include source controls to prevent the production and release of pollutants, and treatments that capture pollutants. A source control can be operational (i.e., managerial) or structural (i.e., a physical or mechanical facility). **Implement appropriate** on-site BMPs such as downspout dispersion, concentrated flow dispersion, sheet flow dispersion, full dispersion, concave vegetated surfaces, multiple small basins, engineered soil/landscape system, infiltration basins, infiltration trenches, bio-filtration swales, basic biofiltration swales, wet biofiltration swales, continuous inflow biofiltration swales, basic filter strips, narrow area filter strips, wetponds, and stormwater treatment wetlands. For a discussion of stormwater BMPs, see, e.g., Washington Department of Ecology, Water Quality Program, Stormwater Management Manual for Western Washington, Publication Numbers 99-11 through 99-15 (August 2001) (<http://www.ecy.wa.gov/programs/wq/stormwater/index.html>)

- on-site to the maximum extent feasible without causing flooding or erosion effects.
- (b) Permeable pavements<sup>12</sup> shall be installed and maintained for load-bearing surfaces, including multiple use trails, wherever soil, slope and traffic conditions allow.
- ii. Runoff treatment facilities.
- (a) Water quality treatment must be provided to remove debris, nutrients, sediment, petroleum hydrocarbons, metals and other pollutants likely to be present using the best available technology applicable to site conditions.
  - (b) Stormwater treatment facilities and BMPs for this project will include a schedule of operation, inspection and maintenance activities for all structural BMPs and conveyance systems. A log of maintenance activities showing what actions were taken will be kept and made available for inspection on request by the EDA and NOAA Fisheries. These operations, inspection and maintenance activities must be conducted, as appropriate:
    - (i) Ensure that the capacity of each facility, structural BMP and conveyance system is not exceeded and that heavy sediment discharges are prevented.
    - (ii) Inspect and clean each structural BMP and conveyance system as needed. Determine whether improvements in operation and maintenance are needed.
    - (iii) Promptly repair any deterioration threatening the effectiveness of any structural BMP or conveyance system.
    - (iv) If storm drains inlets are used, post warning signs on or next to all storm drain inlets that say, as appropriate for the receiving water, "Dump No Waste - Drains to Ground Water, Streams, or Lakes."
    - (v) Ensure that all sediments and liquids from catch basins are disposed of only in an approved facility.
- iii. Flow Control. Infiltration is the preferred methods of flow control. When runoff must be discharged directly, or indirectly through a conveyance system, into fresh surface water or a wetland, the following requirements apply.
- (a) Natural drainage patterns must be maintained. Discharges from the project site must occur at the natural location, to the maximum feasible extent. Discharge of runoff from the project site must not cause an adverse effect to riparian or aquatic habitats.

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<sup>12</sup> Implement appropriate permeable pavements such as porous asphalt and porous concrete, porous pavers, and permeable interlocking concrete pavement. For a discussion of stormwater BMPs, see, e.g., Washington Department of Ecology, Water Quality Program, Stormwater Management Manual for Western Washington, Publication Numbers 99-11 through 99-15 (August 2001) (<http://www.ecy.wa.gov/programs/wq/stormwater/index.html>).

- (b) Any erodible elements of this system must be adequately stabilized to prevent erosion.
  - (c) Surface water from the area must not be diverted from or increased to an existing wetland, stream or near-shore habitat sufficient to cause a significant adverse effect to wetland hydrology, soils or vegetation.
- g. Site restoration. All streambanks, soils and vegetation disturbed by the project are cleaned up and restored as follows.
  - i. Restoration goal. The goal of site restoration is renewal of habitat access, water quality, production of habitat elements (such as LW), channel conditions, flows, watershed conditions and other ecosystem processes that form and maintain productive fish habitats.
  - ii. Streambank shaping. Damaged streambanks must be restored to a natural slope, pattern and profile suitable for establishment of permanent woody vegetation.
  - iii. Revegetation. Areas requiring revegetation must be replanted before the first April 15 following construction with a diverse assemblage of species that are native to the project area or region, including grasses, forbs, shrubs and trees.
  - iv. Pesticides. No pesticide application is allowed, although mechanical or other methods may be used to control weeds and unwanted vegetation.
  - v. Fertilizer. No surface application of fertilizer may occur within 50-feet of any stream channel.
  - vi. Fencing. Fencing must be installed as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
- 3. To implement reasonable and prudent measure #3 (monitoring), the EDA shall ensure that:
  - a. Monitoring. Within 30 days of completing the project, the EDA will submit a monitoring report to NOAA Fisheries describing the EDA's success meeting these terms and conditions. This report will consist of the following information.
    - i. Project identification.
      - (a) Project name;
      - (b) starting and ending dates of work completed for this project; and
      - (c) the name and address of the supervisor(s).
    - ii. A narrative assessment of the project's effects on natural stream function.
    - iii. Photographic documentation of environmental conditions at the project site before, during and after project completion.
      - (a) Photographs will include general project location views and close-ups showing details of the project area and project, including pre and post construction.
      - (b) Each photograph will be labeled with the date, time, photo point, project name, the name of the photographer, and a comment describing the photograph's subject.

- (c) Relevant habitat conditions include characteristics of channels, streambanks, riparian vegetation, flows, water quality, and other visually discernable environmental conditions at the project area, and upstream and downstream of the project.
  - iv. Site restoration.
    - (a) Finished grade slopes and elevations.
    - (b) Log and rock structure elevations, orientation, and anchoring (if any).
    - (c) Planting composition and density.
    - (d) A five-year plan to:
      - (i) Inspect and, if necessary, replace failed plantings to achieve 100 percent survival at the end of the first year, and 80 percent survival for trees and 75 percent survival for shrubs after five years.
        - (i) Control invasive non-native vegetation.
        - (ii) Protect plantings from wildlife damage and other harm.
        - (iii) Provide the EDA annual progress reports.
      - (ii) Inspect and, if necessary, repair the four pieces of LW associated with stormwater discharge erosion control. Repair will be required if there is excess rilling, gullyng, or other erosional problems. Any problem will be promptly reported to NOAA Fisheries and any repair will require approval from NOAA Fisheries prior to implementation.
  - ii. All proposed monitoring reports and any resulting memorandums of this removal action will be submitted to NOAA Fisheries.
- b. If a dead, injured, or sick endangered or threatened species specimen is located, initial notification must be made to the NOAA Fisheries Law Enforcement Office, located at Vancouver Field Office, 600 Maritime, Suite 130, Vancouver, Washington 98661; telephone: 360/418-4246. Care should be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered and threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

- c. Monitoring reports will be submitted to:

NOAA Fisheries  
Oregon Habitat Branch  
Attn: 2002/00807  
525 NE Oregon Street  
Portland, OR 97232

### **3. MAGNUSON-STEVENSON ACT**

#### **3.1 Background**

The objective of the essential fish habitat (EFH) consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

#### **3.2 Magnuson-Stevens Fishery Conservation and Management Act**

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NOAA Fisheries on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of essential fish habitat: “Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species' full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NOAA Fisheries shall provide conservation recommendations for any Federal or state activity that may adversely affect EFH;
- Federal agencies shall within 30 days after receiving conservation recommendations from NOAA Fisheries provide a detailed response in writing to NOAA Fisheries regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity

on EFH. In the case of a response that is inconsistent with the conservation recommendations of NOAA Fisheries, the Federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NOAA Fisheries is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

### **3.3 Identification of EFH**

The Pacific Fisheries Management Council (PFMC) has designated EFH for federally-managed fisheries within the waters of Washington, Oregon, and California. The designated EFH for groundfish and coastal pelagic species encompasses all waters from the mean high water line, and upriver extent of saltwater intrusion in river mouths, along the coasts of Washington, Oregon and California, seaward to the boundary of the U.S. exclusive economic zone (370.4 km)(PFMC 1998a, 1998b). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (*i.e.*, natural waterfalls in existence for several hundred years) (PFMC 1999). In estuarine and marine areas, designated salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (370.4 km) offshore of Washington, Oregon, and California north of Point Conception to the Canadian border.

Detailed descriptions and identifications of EFH for the groundfish species are found in the Final Environmental Assessment/Regulatory Impact Review for Amendment 11 to The Pacific Coast Groundfish Management Plan (PFMC 1998a) and the NOAA Fisheries Essential Fish Habitat for West Coast Groundfish Appendix (Casillas *et al.* 1998). Detailed descriptions and identifications of EFH for the coastal pelagic species are found in Amendment 8 to the Coastal Pelagic Species Fishery Management Plan (PFMC 1998b). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). Assessment of the potential adverse effects to these species' EFH from the proposed action is based on this information.

### **3.4 Proposed Actions**

The proposed action is detailed above in section 1.2. This area has been designated as EFH for various life stages of chinook and coho salmon.



### **3.5 Effects of Proposed Action**

NOAA Fisheries concludes that the effects of this action on designated EFH are likely to be within the range of effects considered in the ESA portion of this consultation.

### **3.6 Conclusion**

NOAA Fisheries believes that the proposed action may adversely affect the EFH for Pacific salmon species.

### **3.7 EFH Conservation Recommendations**

Pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Act, NOAA Fisheries is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the EDA and all of the Reasonable and Prudent Measures and the Terms and Conditions contained in sections 2.2 and 2.3 are applicable to EFH. Therefore, NOAA Fisheries incorporates each of those measures here as EFH conservation recommendations.

### **3.8 Statutory Response Requirement**

Please note that the Magnuson-Stevens Act (section 305(b)) and 50 CFR 600.920(j) requires the Federal agency to provide a written response to NOAA Fisheries after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NOAA Fisheries, the agency must explain its reasons for not following the recommendation.

### **3.9 Supplemental Consultation**

The EDA must reinitiate EFH consultation with NOAA Fisheries if the action is substantially revised or new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 CFR 600.920).

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